

San Francisco Bay Conservation and Development Commission

455 Golden Gate Avenue, Suite 10600, San Francisco, California 94102 tel 415 352 3600 fax 415 352 3606

March 1, 2019

TO: All Commissioners and Alternates

FROM: Lawrence J. Goldzband, Executive Director (415/352-3653; larry.goldzband@bcdc.ca.gov)
Andrea Gaffney, Bay Design Analyst (415/352-3643; andrea.gaffney@bcdc.ca.gov)

SUBJECT: Draft Minutes of the February 11, 2019, BCDC Design Review Board Meeting

1. **Call to Order and Safety Announcement.** Design Review Board (Board) Chair Karen Alschuler called the meeting to order at the Bay Area Metro Center, 375 Beale Street, Yerba Buena Room, First Floor, San Francisco, California, at approximately 5:30 p.m., and asked everyone to introduce themselves.

Other Board members in attendance included Board Vice Chair Gary Strang and Board Members Cheryl Barton, Tom Leader, and Stefan Pellegrini. BCDC staff in attendance included Erik Buehmann, Walt Deppe, Andrea Gaffney, and Brad McCrea. The presenters were Charles Anderson (Schaaf and Wheeler Consulting Civil Engineers) and Terry Huffman (Huffman-Broadway Group, Inc). Also in attendance was Laura Thompson (Metropolitan Transportation Commission, San Francisco Bay Trail, and San Francisco Bay Area Water Trail).

Andrea Gaffney, BCDC Bay Design Analyst, reviewed the safety protocols, meeting protocols, and meeting agenda. She provided the announcements as follows:

a. Emails have gone out reminding Board members to fill out the annual Form 700, Statement of Economic Interests. She asked that Board members submit the form to Reggie by April 1st.

b. The next Board meeting will be held on March 11th. The Board will hold the second review of the Potrero Power Station, the first review of the Oakland As Howard Terminal Proposal, and will receive a briefing on the Environmental Justice Bay Plan Amendment.

Ms. Alschuler stated she attended the Commissioner Workshop on Environmental Justice in January. She stated there are a number of things in those policies that the Board will want to consider. She looks forward to the briefing in March.

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DRB MINUTES
February 11, 2019

c. Ms. Alschuler had requested an update on the Richmond Ferry Terminal Project. Ms. Gaffney showed slides of the progress to date. Mr. Strang provided some background on the project and noted that the parking lot improvements have been made and the site now includes a nice shoreline walk.

2. Report of Chief of Permits. Erik Buehmann, BCDC Coastal Program Manager, presented his report:

a. At the January 3rd Commission meeting, the Commission continued its discussion from the November meeting on implementing the state sea level rise guidance. This discussion will be continued in the future.

b. At the January 17th Commission meeting, the Commission approved a Brief Descriptive Notice to begin the process of updating the Commission's Seaport Plan.

c. Also, at the January 17th Commission meeting, the Commission approved starting the process to review whether to remove the Howard Terminal site at the Port of Oakland, proposed for the Oakland Athletics stadium, as a port priority use.

d. At the February 7th Commission meeting, the Commission approved the 2017 and 2018 Annual Reports, which are posted on the website.

e. In 2018, the regulatory staff issued approximately 117 permits, including amendments and major permits, resulting in approximately 13 acres and 6.6 miles of new public access. The statistics for 2017 were similar.

f. At the February 21st Commission meeting, the Commission will consider the application for the Alameda Landing Project, which the Board has reviewed in the past.

g. Yuriko Jewett, a new BCDC Permit Analyst, has been hired to the permits team and will be filling Hannah Miller's vacant position.

3. Approval of Draft Minutes for December 17, 2018, Meeting.

MOTION: Vice Chair Strang moved approval of the Minutes for the December 17, 2018, San Francisco Bay Conservation and Development Commission Design Review Board meeting as presented, seconded by Mr. Leader.

VOTE: The motion carried with a vote of 5-0-0 with Board Chair Alschuler, Board Vice Chair Strang, and Board Members Barton, Leader, and Pellegrini voting approval with no abstentions.

4. Foster City Levee Protection Planning and Improvement Project (First Review). The Board held their first review of the proposal by Foster City to rehabilitate and raise approximately six miles of the existing levees that surround Foster City along the Bay, in San Mateo County. Public access improvements associated with the project would include reconstructing and widening the Bay Trail along the levee and modifying access pathways, parks, and amenities along the trail.

a. **Staff Presentation.** Walt Deppe, BCDC Coastal Program Analyst, introduced the project and showed a video from a recent site visit. Mr. Deppe described points of interest as the video played. He reviewed the seven public access objectives:

- (1) Make public access public.
- (2) Make public access usable.
- (3) Provide, maintain, and enhance visual access to the Bay and the shoreline.
- (4) Maintain and enhance visual quality of the Bay, shoreline, and adjacent developments.
- (5) Provide connections to and continuity along the shoreline.
- (6) Take advantage of the Bay setting.
- (7) Ensure that public access is compatible with wildlife through siting, design, and management strategies.

Mr. Deppe summarized the issues in the staff report regarding the physical and visual access and sea level rise as follows:

- (8) Visual access to the Bay and view impacts from the proposed levee raising project.
- (9) Physical shoreline access.
 - (a) Low-lying public access areas on the water side of the floodwall.
 - (b) The oyster shell bar with wildlife viewing opportunities.
 - (c) The “Runco” property and associated public trails.
- (10) Trail configuration for the public’s enjoyment of the Bay setting.
 - (a) Configuration of pedestrian and bicycle lanes on the trail.
 - (b) Railings and floodwalls.
- (11) Trail access points.
 - (a) Formal access.
 - (b) Informal access.
- (12) Appropriateness of site amenities, signage, planting, railings, interpretive elements, and lighting such that the public spaces are inviting and enjoyable to the greatest amount of the public.
- (13) Adequacy of shoreline public parking.
- (14) Maintenance and management of the public access areas.
- (15) Resilient design and signage strategies for public access areas subject to storm-based flooding.

b. **Project Presentation.** Charles D. Anderson, Schaaf and Wheeler Consulting Civil Engineers, provided an overview, with a slide presentation, of the background, context, existing site conditions, and a detailed description of the proposed project.

c. **Board Questions.** Following the presentation, the Board asked a series of questions:

Ms. Alschuler suggested first asking broad questions to better understand the site in time, in the Bay, and other ways that the BCDC has responsibility for.

Ms. Alschuler stated it is unusual for the Board to review six miles of levee but welcomes that because issues cannot be solved on smaller pieces or do not necessarily set the best precedents. Here is a chance to do something that will have a positive effect around the Bay depending on how it is handled.

Ms. Alschuler stated the permit history began in 1976 and has gone through three or four changes within the last 40 years. She asked how that fits in with what the project proponents are aiming at. Pages two and three of the text were unclear as to which of the proposed elevations will be met with the levee improvements. Elevations are currently at 10 to 13 feet above the North American Vertical Datum (NAVD) level and they should be at 12.2 to 16.5 feet to meet the Federal Emergency Management Agency's (FEMA) accreditation requirements. She asked if 13- to 19-foot elevation is actually a 2050 goal and therefore where the project is going is to the 13- to 19-foot elevation in the diagrams shown in the presentation.

Mr. Anderson stated that is correct.

Ms. Alschuler stated her understanding that the project proponents are not just satisfying what is currently needed but are satisfying the 2050 sea level rise requirements.

Mr. Anderson stated the proposed project will be resilient to 2050.

Ms. Alschuler stated her understanding that there is not a specific program for 2100 except the options shown on the presentation slides, which are currently undecided. She stated all the diagrams and views presented meet the 13- to 19-foot level.

Mr. Anderson stated that is correct. He stated everything shown in the presentation is resilient to sea level rise to 2050 against a 100-year storm with wave runoff.

Ms. Alschuler stated the meeting materials contain a section that talks about four rehabilitation types. She stated her understanding that all of those are considered rehabilitation of the levee. The first three types were described as occurring around the edge of the levee, the main one being adding to the levee with a wall of different types.

Ms. Alschuler stated the fourth one mentioned, when looking at the types of actions, is something called FloodBreak Devices. She stated she wanted to ensure that the Board understands this. She asked if everything related to FloodBreak Devices was presented.

Ms. Alschuler stated the meeting materials talk about devices that use hydrostatic force from floodwaters to raise a grade-flush gate to prevent water from entering certain areas. She asked if there is a location with gates like that.

Mr. Anderson stated there are. He stated those are what is known as the FloodBreaks. There is a total of two of them. The levee elevation must come down to get under the San Mateo Bridge. At some point, the flood protection flips from the Bay side to the land side of the trail, therefore something is needed at that point to close the gap. That is a FloodBreak; it is a passive system.

Mr. Anderson stated the other location where a FloodBreak is used is at the emergency egress to Redwood City. He pointed out the location of the emergency egress on a presentation slide, where it goes to the Belmont Sports Complex. He stated the only way out of Foster City is either Hillsdale to Highway 101 or Foster City Boulevard. If individuals need to get out a different direction, there is a way to do so at that location. The FloodBreak there is an opening in the floodwall to allow emergency vehicles through.

Mr. Anderson stated the FloodBreak is normally down. If the water level is high enough it literally floats the gate up. He stated there are videos available to show what that looks like. It is FEMA-approved and is used everywhere. It is a positive, passive way to do flood protection so someone does not have to go out to close the gate. He noted that FEMA does not allow reliance on sandbags.

Ms. Alschuler stated the meeting materials talk about bridges. She asked if the new bridges are replacing the existing bridges and are not additional bridges.

Mr. Anderson stated one of the bridges is replacing the bridge at Bay Shore Towers. He pointed to areas on a presentation slide where two new bridges will be built to restore the muted tidal action. One area currently contains a crushed culvert. There is a six- to seven-foot difference in the water level at King Tide between the Bay and the O'Neill Slough because the culvert is crushed, which impedes the flow. The old culvert will be excavated out and replaced with free-span bridges to correct that situation.

Terry Huffman, Huffman-Broadway Group, Inc., stated there is a berm at the other end of O'Neill slough with no culvert. The plan is to add a bridge in that location to help with tidal circulation. (This is the location of the second proposed bridge.)

Ms. Alschuler stated Foster City and its neighboring cities are partners in this effort. She stated 8,000 parcels within Foster City and 9,000 parcels within San Mateo are protected by this levee system. She asked if there is anything more the Board should know about the Foster City/San Mateo partnership.

Mr. Anderson stated the San Mateo levee system is accredited and abut the Foster City system. The San Mateo levee system was done in 2012, which was before the FEMA study came out. Their levee system is the same at the northern project end, but at the southern end there is a series of floodwalls at the O'Neill Slough Tide Gate, which belong to the city of San Mateo. The San Mateo elevations are adequate; the proposed project plan is to match San Mateo's elevations.

Mr. Strang asked where the San Mateo floodwalls or levee system pick up and how they jump across the slough at the southern end of the project.

Mr. Anderson stated it is a contiguous system. He pointed out the Seal Slough Landfill in San Mateo. He stated the San Mateo levee system crosses Seal Slough and ends at a location he pointed out on a slide. He stated it does not jump across; it simply becomes Foster City's. He pointed to the flood protection system in that location on the slide. He stated it comes around the corner and ends. The high ground is at Highway 101.

Mr. Strang asked if water coming into the slough is water coming in from behind – from Belmont Slough and Seal Slough.

Mr. Anderson stated that is correct. He pointed out Marina Lagoon in the city of San Mateo on a slide and stated there is a large pump station at that location. Rainfall that is interior to the levee system plus three major creeks come in there, so they have five 100,000-gallon-per-minute pumps out there that are able to discharge that to the Bay.

Mr. Anderson stated the Foster City Lagoon also has a large pump station. There are no creeks in Foster City. Rainfall runs off in the storm drain system, which leads to the lagoon where the water is stored and then pumped out to the Bay.

Mr. Anderson stated those two systems will not be affected by the levee improvements. They are designed to handle 100-year storms and more to evacuate the water into the Bay.

Ms. Barton asked, although it is relatively flat, if it takes into account all the water that could possibly come in a storm from upland areas behind the levee.

Mr. Anderson stated it does. Laurel Creek, which comes into the Marina Lagoon in San Mateo, has large watersheds. The 16th Avenue Drainage Channel and the 19th Avenue Drainage Channel also help drain at least one half of the square mile from San Mateo, but the pumps are large enough to handle all of that.

Ms. Barton asked if they all function as they should.

Mr. Anderson stated they do. He stated the levee keeps the Bay out but, if only the Bay is kept out, water will stack up behind the levees, so the two interior systems then pump the water across the levees.

Ms. Alschuler asked in what ways the BCDC has opportunities to make this a model or if the proposed project is an unusual exception for what might be happening around the Bay.

Ms. Barton stated the aerial photo with the red line on it is the first time the Board has seen this scale of project. It is important and striking to be thinking in terms of the larger landscape scale. It would be interesting to learn about comparable projects that are currently happening.

Ms. Alschuler asked if anything has come from new research or new learnings about sea level rise from the proposals such as Resilient by Design, and whether any of this information has been incorporated into this project proposal.

Mr. Anderson stated the South Bay Salt Pond Restoration comes to mind and yet it is different because it is not in a high-wave environment. San Francisco Airport is another project that comes to mind. Foster City is built right up to the Bay. The question is what to do to keep the water out. San Francisco Airport is probably most analogous because it is land that is built out into the Bay that will become more and more underwater.

Mr. Leader asked to invite Mark Stacey, from U.C. Berkeley, who has done a vast study on the entire Bay shoreline, to present at a future Board meeting on what the future holds.

Mr. Leader asked about the breakwater idea and the piled-up material further offshore. He asked if this is a case where the water gets too deep too fast. Also, he asked if there is a possibility of living breakwaters or breakwaters that are established at one level through natural means to grow themselves to keep pace with the sea level that could possibly help alleviate wave runup as one way of reducing the pressure on wall heights in the future.

Mr. Anderson stated Professor Stacey has consulted with the project proponents on this project. He stated Foster City is in essence already a hardened system, meaning a line in the sand. The option to not harden this would be to let the Bay come back into Foster City. He stated, as far as the project proponents are concerned, that is not an option.

Mr. Anderson agreed with Mr. Leader on asking Professor Stacey to discuss what it means to address higher water levels beyond 2050. He stated one of the reasons that the project proponents have taken an adaptive approach is that massive changes cannot be built now, because at some point it becomes a regional issue.

Mr. Anderson stated, regarding offshore breakwaters, one of the concerns is, although there are small shell beaches at certain locations, the vast majority of the exposure to the waves along the waterfront is significant. He stated the project proponents cannot ask FEMA for accreditation by stating they hope that these areas will grow naturally. FEMA has never accredited anything of that nature and there are already waves that are overtopping the levee system.

Mr. Anderson stated there have been discussions with the water agency about doing pilot testing to try softer shoreline solutions and monitor them for the future. He stated, regarding the offshore breakwater, the tops of the breakwater essentially need to be at the proposed stillwater elevation project for 2050 water levels.

Ms. Alschuler stated she was glad to hear that. She suggested holding this idea for the Board comment section because one of the things she was wondering was if there was a way to do any of this work in part to be a model to learn something as the project goes along. She suggested exploring that after public comment and further Board discussion.

Mr. Anderson pointed out an area of opportunity to do pilot studies on a presentation slide (at the 3rd Avenue upper launch.) He stated this is purportedly one of the best kitesurfing areas in the world and they will be losing their beach.

Ms. Barton asked, if everyone were to armor the shore, where the sacrificial areas of the shoreline would be located. She asked where the water can be absorbed, where is retreat feasible.

Mr. Anderson stated Foster City needs to do something to preserve itself immediately. Part of the environmental documents analyzed the impact of raising the levees now and it has minimal effects on the water levels in the Bay. The entire region must be forward-thinking on this or face a more serious problem later.

Mr. Pellegrini asked to what extent the roadways adjacent to the levee system are considered as part of the protective strategy. In some situations, the shoreline includes the public access and everything up to private property lines. Other sensitive places in the country that are dealing with this issue prompt discussions about raising infrastructure and access; he asked how the existing parallel roadways could be part of the solution.

Mr. Anderson stated Beach Park Boulevard was discussed but going inland, especially into private property, is not feasible at this time.

Mr. Pellegrini asked if there is infrastructure of concern below ground in the roadway.

Mr. Anderson stated the sanitary sewer collection system is below ground. Foster City's elevation is nearly at sea level.

Mr. Pellegrini asked if the amount of piping would be increased in the long term as sea level rises.

Mr. Anderson stated the long-term strategy is for Foster City to remain and protect itself and will continue to pump water.

Mr. Strang asked when the project ideally would go forward.

Mr. Anderson stated the project would ideally go forward in January of 2020.

Mr. Strang asked when the most recent study began.

Mr. Anderson stated FEMA released the new results in 2014 to show there may be a problem in Foster City; the city immediately resurveyed the levee system. The planning started in 2015. There have been two changes in sea level rise estimates since then.

Ms. Alschuler asked Board members to move away from big-picture questions and focus on the requests from the staff report. The Board members commented on the ease of understanding in the presentation and exhibits.

Mr. Pellegrini asked about the typical width of the wall cap.

Mr. Anderson stated the mechanically-stabilized earth wall is about twelve inches deep with a slight batter that sets it back. It is difficult to build concrete footing because of the pressure. The strength of the reinforced wall is in the soil.

Mr. Pellegrini asked how wide the piece with the control line is.

Mr. Anderson stated the sheet pile wall is also twelve inches deep.

Mr. Pellegrini asked about the exposed wall height.

Mr. Anderson stated there is one extreme case of eight feet near private property that almost encroaches onto the street. He noted that there was no better alternative.

Ms. Alschuler asked about the intention for development and zoning of that private property.

Mr. Anderson stated the project proponents are trying to stay away from the property.

Mr. Strang asked if all of the two-to-one slopes are riprap.

Mr. Anderson stated they are typical inland slopes, all earthen with plantings such as ice plant. There is currently riprap on the Bay side that the project will leave in place. The project will not add riprap except to fill in gaps between existing riprap and the new wall.

Mr. Strang stated two-to-one is not an ideal planting slope, but ice plant is a problem-solver.

Mr. Anderson agreed.

Ms. Alschuler stated her assumption that the 67 informal ad hoc connections are being eliminated.

Mr. Anderson stated they are being eliminated but individuals could make them again.

Mr. Leader asked if the inside of the wall is seat height or if individuals can walk on top of it.

Mr. Anderson stated it is 42 inches. It is Occupational Safety and Health Administration (OSHA) guardrail height. Individuals can get on top if it. He noted that project proponents are putting a guardrail even at the two-to-one slope area, where there is a fall hazard. He stated there is approximately four miles of guardrail total.

Ms. Barton stated she is interested in the windows that are being provided in the floodwall. One of the elevations looked like there was a bench outside of the window but the window is glass. She asked for further details.

Mr. Anderson stated the window locations have yet to be determined. They may be at the levee top trail access points.

Ms. Alschuler asked if the windows will be at the places noted along the edge on the map indicated by views.

Mr. Anderson stated there is not a count of the windows yet. At the trail access points, windows may be able to go through the wall, such as at observation decks with guardrails. He stated it would be nice to put a window every so often along the trail for interest.

Ms. Barton stated one elevation indicated that they would be glass.

Mr. Anderson stated the windows will be glass that handles the flood load. He stated he has videos of debris being shot at them at 200 miles per hour.

Ms. Barton stated her understanding that the glass windows are the ones that do not allow physical shoreline access and the openings that are not glass allow physical shoreline access.

Mr. Anderson stated the idea is to provide variety over the six miles of trails.

Ms. Barton noted that someone will have to clean the windows.

Mr. Anderson agreed.

Mr. Leader asked about seismic stability.

Mr. Anderson stated there are flood loads, wave loads, and seismic loads. The height is controlled by the wave load.

Mr. Leader asked about earthen levees.

Mr. Anderson stated the structural capacity of what is underneath the levee and how much it will settle has been analyzed. For every foot of fill placed, there are three to four inches of settlement.

Mr. Strang stated the 2100 sea level rise solution is regional. He asked if that means the pumps will be built and manned by a regional entity or if Foster City is responsible for pumping the water out.

Mr. Anderson stated Foster City will always be responsible for pumping the water out. As long as there is levee protection, it is a matter of adding more and more horsepower to lift the water against a higher and higher tide elevation.

Mr. Strang asked if the levee is uniformly vulnerable along the entire length and it must be treated similarly or if there are problem areas to focus on for different solutions.

Mr. Anderson stated, in terms of FEMA, it is treated similarly. In Foster City, everyone is at the same elevation and has the same risk.

d. **Public Hearing.** One member of the public provided the following comments:

Laura Thompson, Metropolitan Transportation Commission, Project Manager, San Francisco Bay Trail, and Project Team Member, San Francisco Bay Area Water Trail, stated she has comments related to her two projects.

Ms. Thompson provided comments for the San Francisco Bay Area Water Trail. She stated one of the 40 designated launch sites for nonmotorized human-powered small boats around the Bay is Baywinds Park. It is a popular kiteboarding and windsurfing site.

Ms. Thompson stated her understanding that most of the levee around the Water Trail site will not be changed. She pointed out that just to the south of the beach near Baywinds Park there are informal access points back to the Water Trail. According to the plans, one or more of those will be maintained. She stated the importance of access to be maintained there because often the winds blow the kiteboarders and windsurfers east so they need a way to get back to land.

Ms. Thompson provided comments for the San Francisco Bay Trail. She stated there is a new era of looking at shoreline public access, but more and more she is becoming involved in how to preserve the Bay Trail and to look at the future of shoreline public access.

Ms. Thompson stated, within Foster City's six miles, there is a continuous stretch of Bay Trail from Coyote Point Park in San Mateo down to San Carlos Airport, which is approximately 17 miles. This is a long, populated section of the Bay Trail that should be preserved and the city is proud of the section of Bay Trail that they have.

Ms. Thompson stated she is pleased to see that, as part of this project, there will be an increase in the width of the Bay Trail. Design guidelines recommend 18 feet. Because of the growing Bay Area and more individuals wanting to get out along the edge of the shoreline, it is important to accommodate that.

Ms. Thompson stated she appreciated the approximately 50 access points from the inland areas to get to the Bay Trail. This is an area where many individuals are following the edge of the shoreline, but often, they are not able to access it. The preservation of the access points is important.

Ms. Thompson stated she was concerned about the section of trail under the bridge but felt better after seeing the presentation. She reiterated the importance that the Bay Trail is not often inundated and that it continues to be a functional and usable corridor for cyclists and pedestrians.

Ms. Thompson encouraged the city to ensure that they are looking at roads that either already have bicycle and pedestrian infrastructure or can accommodate new infrastructure to ensure that, during the construction period, the streets that individuals are detoured out on are safe. She stated she is happy to work with the city on that in the future.

e. **Board Discussion.** The Board responded to questions from the staff report as follows:

(1) **Physical and Visual Access**

(a) Visual access to the Bay and view impacts from the proposed levee raising project.

Ms. Alschuler stated it is important to think about Foster City and this long path, which is part of a long, continuous trail. She asked if this is being provided, along with the regional resource that this access needs to be, not just for connections to Foster City but to the general region, which has been quickly growing.

Ms. Alschuler asked Board members for their thoughts on the levee raising and if anything needs to be done differently because of the added population, such as in the numbers of access points.

Mr. Strang stated he appreciated the before-and-after simulations. He stated after looking at that he does not see the project as an amenity so much as a mitigation. The question is if it is inevitable. If it is, then the proposed design is reasonable, but it is not a “win” for the Bay Trail in terms of the visibility of the landscape and the planting and horticultural problems that must be overcome in order to get the two-to-one slopes.

Mr. Strang asked what else can be done within the context of this complex problem to make something interpretive or artistic out of the existing site. He stated the landscape components shown is an engineering diagram. He asked if there is a way to embrace this problem if it is inevitable and to try to do something that is educational, interpretive, and beautiful within this very difficult constraint.

Mr. Strang stated Mr. Leader asked about the width of the wall. He asked Mr. Leader if he felt it should be wider or narrower.

Mr. Leader stated children could stand on it.

Mr. Strang asked if there is another way of thinking of it other than a 12-inch-wide wall that goes for six miles.

Mr. Leader suggested a way to get individuals to support the proposal beyond the fact that it is necessary is to include amenities that can be attached to this that would be educational or in some way benefit the purposes of shoreline access and shoreline visibility - for example, places behind the wall where the landform could be built up higher than necessary to give individuals a view out above the guardrail height, or habitat projects that could accrue to this or different locations, or steps that get you up and over the wall.

Mr. Strang stated the assumption that there would be no fill. He stated fill used in the right way could be a benefit, such as getting a restored and revegetated shoreline. It may be worth looking into.

Ms. Alschuler stated it struck her that in some ways the project is with moving forward with blinders on. There are individuals the world over who are trying to solve this problem with lots of interesting examples such as an inhabited levee, an island with access, or a retreat. Large public open spaces in Foster City are lacking. She stated the big question around the Bay will be, as people levee off, if they at the same time carry the responsibility to store water that limits the overall Bay effect.

Ms. Alschuler stated maybe it is worth studying because the solution for 2100 is unknown, thinking of ways to take responsibility for that period between 2100 and 2150, and doing some kind of pilot project.

Mr. Strang stated it is interesting to compare this project to San Francisco's Embarcadero in terms of the length.

Ms. Alschuler agreed that the length is similar.

Mr. Strang stated there was an international competition when the Embarcadero was restored. He suggested a continuous idea or something that can weave it all together into something that is greater than the sum of its parts.

Mr. Pellegrini stated the Board typically considers 100 feet from the shoreline for its jurisdiction in which to consider public access. It appears that over half of this project runs parallel to a roadway which is partially within the shoreline band jurisdiction. He stated, if the roadway and the public access along the shoreline are more or less within the same jurisdiction, they are both likely publicly-owned. He stated the Board has to take for granted that there is not a better design for the levee and public access system on the water side of the roadway. He suggested rethinking the roadway.

Mr. Pellegrini stated it is a four-lane roadway for a large section along the levee. The roadway has no center turn lane, menial crossings back into the neighborhoods, and little pedestrian infrastructure on the roadway itself. He stated he was struggling with that in terms of maximizing public access.

Mr. Pellegrini stated it would be helpful to better understand how the roadway connects back to the neighborhoods that it is fronting and if there are opportunities to better plug into that. He asked if the roadway could be re-designed in such a way so that an extra 13 to 20 feet could be freed up from the roadway to help think holistically about the edge condition and contribute the levee project to improve the quality of the project.

Mr. Pellegrini stated freeing up a few feet of the roadway could create more space for public access on either side of the path, or for habitat. In order for the Board to make a decision about whether or not the physical access is appropriate, it needs to understand to what extent the design of Beach Park Boulevard and other adjacent roadways can become part of a design strategy.

Mr. Pellegrini stated it raises red flags to invest \$90 million but to leave the roadway alone and assume that the connections to the neighborhoods and to the shoreline are going to remain the same only to worsen the visual access. He asked for better understanding if there are ways to think of this more holistically that can benefit the transverse access to the Bay in addition to the linear access along the Bay.

Mr. Leader asked if it would reduce the cost of some of the walls that are driving up the cost to consider the roadway to adjust the levee project vertically and horizontally.

Mr. Pellegrini stated he could understand the constraints for the private properties that are up against the Bay Trail, but he was struggling with the adjacent public right-of-way that is at least 60 feet wide, particularly when it is within the 100-foot shoreline band to maximize public access.

Ms. Alschuler stated that edge is given over to a continuous line of parking. That is an interesting thought because it is a very wide street. It can be used for different things in different parts located in the city and places where public access could be staged and communities gather.

(b) Physical Shoreline Access

- (i) Low-lying public access areas on the water side of the floodwall.
- (ii) The oyster shell bar with wildlife viewing opportunities.
- (iii) The “Runco” property and associated public trails.

Suggestions to this question are incorporated in the suggestions to other questions.

(c) Trail configuration for public’s enjoyment of the Bay setting.

(d) Configuration of pedestrian and bicycle lanes on the trail.

(e) Railings and floodwalls.

Suggestions to this question are incorporated in the suggestions to other questions.

(f) Trail Access Points

- (i) Formal access.
- (ii) Informal access.

Ms. Alschuler suggested helping the neighborhoods have a place to create more informal access points to encourage individuals to use it by perhaps planting something different in those locations instead of ice plant.

Ms. Barton stated clearly there is a desire to go perpendicular to the road and the wall, especially where the sloughs are that would lead out to a point. She suggested boardwalks or a different kind of access that is possible for educational viewing of wildlife with possible wildlife programs other than just thinking of the levee as a line along the shore.

(g) Appropriateness of Site Amenities, Signage, Planting, Railings, Interpretive Elements, and Lighting such that the Public Spaces are Inviting and Enjoyable to the Greatest Amount of the Public.

Mr. Strang stated it seems like there are individual elements in the site amenities that may be prefabricated, items that are placed perhaps carefully. He suggested a language of furniture that comes out of the wall or is recessed into the wall, trying to make something out of the reality of this incredibly long wall.

Ms. Barton agreed and stated the windows and window platforms also have that potential and could be broader.

Mr. Strang stated great designs come out of solving new kinds of problems that have never been faced before. Somewhere there is a good solution to all of this.

Mr. Leader stated places have names to help the public get a handle on what it will be like to use it. He suggested this as a strategy for helping create places along the levee trail in where the community can make connections to the history of the place and Bay.

Mr. Pellegrini suggested understanding where the shoreline used to be as part of the interpretive component. There are interesting things happening at the edge that are happening because the land has been changed, such as places where sand has been deposited or where birds are dropping shells. This could be information that is shared about the place because many of those are positive reactions to how the shoreline has been changed.

Mr. Strang stated, after the two-to-one slopes are there and they are compacted to the extent that they need to be to be stable, while some of these native plants are beautiful, there should be a focus on problem-solving plants even if they are not native.

Ms. Barton suggested including a test-planting plot.

(h) **Adequacy of shoreline Public Parking.** Ms. Alschuler suggested adjusting the parking so that it does not take the whole edge of the levees, particularly along the southeast portion.

(i) **Maintenance and Management of the Public Access Areas.** Ms. Alschuler stated maintenance and management are important in terms of taking a long look. It is related to sea level rise, design, signage, adaptation, and dealing with storms. With a solution only to 2050 and not knowing what will happen after that to protect these many parcels and citizens, taking on the maintenance of this also means a long-term analysis of what is going to happen because there is not a lot of time between now and 2050. Not only would it have to be analyzed, it would have to be in place.

Ms. Alschuler stated taking on the maintenance should be writ large as taking on the responsibility to figure this out and, wherever possible, initiate pilot projects or studies that begin to determine what will happen not just to protect the parcels but to protect the region's right to have access to the Bay.

Ms. Alschuler suggested finding a way for the Board to do a site visit together to identify areas that would help solve issues.

(2) **Sea Level Rise.** Resilient design and signage strategies for public access areas subject to storm-based flooding.

Suggestions to this question are incorporated in the suggestions to other questions.

f. **Applicant Response.** Mr. Anderson stated, regarding the roadway, the project design team asked the same question and were told not to consider the roadway, but BCDC might receive a different answer. He noted that it would require an additional California Environmental Quality Act (CEQA) review.

Ms. Alschuler stated much could be done through an amendment to the CEQA document.

Mr. Anderson stated it is not in the project description; however, it would enable replacing the wall there with fill and would possibly be less expensive.

Mr. Pellegrini stated the public lands within the shoreline band could be leveraged in a jurisdiction-wide solution.

Mr. Leader asked what percentage of the cost estimate is in walls.

Mr. Anderson stated about twenty percent.

Mr. Pellegrini stated, with sea level rise, public access would be the easiest to deal with because impacting private lands is more complicated.

Ms. Gaffney asked the city to respond.

Candace Steinmetz, Deputy City Attorney, stated there are various easements along the strip which may allow for this use. The roadway easement is separate, may not allow for other uses, and may have a minimum width. It is pieced together with parcels that comprise the six-mile length.

Mr. Pellegrini stated his question is just about the portion where Beach Park Boulevard is adjacent to the shoreline edge, and other roadways adjacent to the levee.

Ms. Steinmetz stated she was not involved in that discussion. She asked Mr. Anderson to elaborate on why he was told no by the city and what his questions were as to how he could use that width.

Mr. Anderson stated it was determined early on that the project would not extend out into San Francisco Bay, which only leaves the other side. The city told them not to push into the land side.

Ms. Barton asked if the reason was because of the cost.

Mr. Anderson stated it was the whole going down the path of figuring out if it is feasible with traffic studies to ensure it was workable. He stated it is a wide road; there is no doubt about that.

Ms. Barton stated these are the kinds of changes that need to be considered.

Ms. Steinmetz stated the Environmental Impact Report (EIR) is certified by the city so a change of this sort would need to go back through the CEQA process to determine how it would affect traffic.

Ms. Barton stated the Board needs to become involved much further upstream (earlier) in projects that set these kinds of precedents.

Mr. Leader agreed that this will set a huge precedent.

Mr. Anderson stated, although this is the first time the project proponents have come before the Board, the project proponents have been working with BCDC staff.

Mr. Strang asked if accreditation is forfeited if problems are not solved by a certain date.

Mr. Anderson stated, according to FEMA, if the bond measure had not passed by June 2018, accreditation would have been lost when the FEMA maps came out. There is no deadline for construction, but there is also no guarantee how long the allowance will last.

Mr. Strang stated it would be a good investment if the waterside development helped solve another longer-range problem and if taking a step back would set the stage for future sea level rise.

Mr. Anderson stated it seems impossible to take that on under the current time constraints.

Ms. Steinmetz stated that section is a four-lane road. One of the reasons it is a four-lane road is because there is a school adjacent to the area. It is a heavily-trafficked area per the traffic studies.

Ms. Alschuler stated the schools and every house along the roadway would benefit from a better setting.

Mr. Anderson stated, as long as progress is made, FEMA seems to approve.

Mr. Leader stated more specificity about physical parameters, especially for breakwaters, would help the Board make a decision.

Mr. Huffman stated, in compiling permit application packages and working with the Regional Water Quality Control Board, the project proponents have added a condition that the city will agree to pilot studies to look at offshore breakwaters, living shorelines, and alternative approaches. The northern half of the project is a high-energy zone and a world-class kiteboarding area, which requires a special balance. There are also biological constraints with habitats in the western and southern areas that are important.

Ms. Alschuler stated Laura Thompson's comments about safety and access should also be taken into consideration.

Ms. Barton asked if people are prevented from using the habitat areas seasonally.

Mr. Huffman stated seasonal use is allowed, but year-round usage suggestions to create overlooks or widen the trail may encroach into these sensitive areas. Improving the lagoon area with the collapsed culvert and putting a bridge on each end and opening it up for full tidal circulation will increase watchable wildlife. Certain times of the year that area becomes stagnant because, as the water lowers, it cannot get out of the collapsed culvert area.

Mr. Anderson stated sea level rise estimates have changed several times thus far; future levels are unknown. Adaptability is vital since any impacts on the Bay will have indeterminable effects. Again, pilot projects are part of the permit conditions from the regional board.

Ms. Alschuler suggested a commitment to an immediate look at that and not waiting another 20 years to solve a 10-year problem.

Mr. Anderson stated the pilot projects will be part of the permit conditions from the Regional Board to see what works and what does not.

Ms. Gaffney referred to Slide 3A, the configuration of the pedestrian and bicycle areas on the Bay Trail. She asked if there is value in biasing the unpaved area of the trail on the Bay side for joggers to be closer to the floodwall.

Mr. Pellegrini clarified that the paved area would increase in width and there would be an unpaved shoulder on both sides.

Ms. Gaffney agreed and stated it is typical for most of the area but the width is 4 and 2 instead of 3 and 3.

Ms. Barton stated she was out there yesterday and saw runners on the dirt and the bicycle path and bicyclists on the running path. It is a free-for-all.

Ms. Gaffney agreed and asked, if there was a chance to organize it more clearly, if it would be used. She asked if this is the best configuration.

Ms. Alschuler stated there are adults and children there. She stated it should be designed in the best interest of public safety because it is a shared path. She asked if the runners want to be on the pavement.

Ms. Gaffney stated they would rather be off the pavement. She stated sometimes individuals want to walk on pavement but often not. She suggested, in trail conditions such as this, to bias the unpaved surface towards the wall and towards the water for walking and jogging; because of the angle of the guardrail, peripheral vision would be less impacted.

Mr. Anderson stated it currently is biased towards pedestrians being on the wall side. The paved portion is striped that way. He pointed out the bidirectional bicycle lane and pedestrian path on a presentation slide and stated there is striping for the pedestrians to get across the bicycle lanes.

Mr. Anderson stated currently the pavement is centered with the same three-foot shoulders on each side. There are limits to what the California Department of Transportation (Caltrans) recommends. He stated his understanding that Ms. Gaffney is asking to bias the trail so the shoulder is wider on the wall side by one foot.

Mr. Anderson stated it currently is not gravel but what is called GraniteCrete, which has been used at locations such as the Presidio. He agreed that the joggers will prefer using the GraniteCrete over the paved trail. He stated the idea is for joggers to easily get around individuals standing by the wall and the bicycles are on the far side away from pedestrians.

Mr. Anderson agreed that it is safest to put pedestrians on the Bay side. The design is easy to shift at this point as long as there is some shoulder as a warning because a two-to-one slope is steep.

Ms. Alschuler stated there is the question of whether the Board wants to see this project again in an official way or to be engaged in the pilots.

Mr. Leader stated the Board is sensitive to the fact that the project proponents need to enter the construction phase shortly.

Mr. Strang asked about the level of completion of the drawings. He stated, since the Board is seeing this for the first time, they think it is preliminary and flexible. He asked where the project proponents think they are in the timeline.

Mr. Anderson stated the design is approaching 90 percent complete. It is expected to go out for bid in the fall.

Ms. Alschuler asked about the board that asked the project proponents to do pilot projects.

Mr. Anderson stated it was the Regional Water Quality Control Board.

Mr. Leader asked how much it could change before needing to do another EIR.

Mr. Anderson stated doing something with Beach Park Boulevard for supplemental traffic would trigger another study. This would add another six to eight months to the timeline.

Ms. Gaffney asked if the Board would like to see this project again.

Ms. Alschuler recommended that the Board see this project again.

Mr. Leader asked if there was a way to get to a quick assessment of parameters that are being pushed on here. There seems to be a burden to know a little more.

Ms. Alschuler agreed and suggested things that would enhance the basics of the project are there. In whatever form it might be or whatever order of events, this Board should see it again and, if possible, focus on whether there are opportunities to have better public access.

Ms. Barton asked if the Regional Water Quality Review Board is doing something or will do something after the project is built.

Mr. Huffman stated the project proponents have applied for an Army Corps of Engineers permitting approval. In addition to that, project proponents must apply for water quality certification and waste discharge requirements through the Regional Board. In addition, an application must be submitted to the BCDC as well as the State Lands Commission.

Ms. Barton stated her understanding that the Water Quality Control Board is working on prototypes of pilot projects or investigations.

Mr. Huffman stated the project proponents came to an agreement with the Regional Board on a condition that would be added to the authorization that they would conduct pilot studies.

Ms. Barton stated her understanding that the pilot studies would begin after the project is built.

Mr. Huffman stated that is correct. The pilot studies will primarily be offshore to reduce the wave run-up. There would be a living shore or some other types of fixtures. The pilot studies would begin within a five-year period from the date of completion.

Mr. Huffman stated his appreciation for the Board's sensitivity to the schedule in terms of the construction date. He stated, if an EIR supplement is necessary, all the agencies including the BCDC, Regional Water Quality Control Board, and State Lands Commission cannot issue an authorization until after the CEQA review has been finalized. This would cause delay and must be considered in the scheduling.

Ms. Alschuler stated the Board has a responsibility to see this project again.

5. Continuing Discussion on Design Review Board Members and Alternates. Ms. Gaffney stated the discussion on Board members and alternates began at the December meeting. She stated Roger Leventhal has resigned from the Board and has expressed a desire to become an alternate. This leaves a vacant engineering seat. She stated she asked Board members for a list of names at the December meeting and she put forward Bob Battalio, who is in attendance today.

Ms. Gaffney stated the next steps are for staff to write a report recommending approval of Mr. Battalio at the March 7th Commission meeting.

Ms. Gaffney stated the next issue is to identify a list of new potential Board members. The idea is to have a list of individuals in the event that current Board members decide to become alternates or, if regulations can be changed, to allow new Board members to be alternates, which would provide the ability to have a greater possibility of a quorum and of having the full seven Board members in attendance.

Ms. Gaffney asked Board members to send her names of possible candidates. In addition to the criteria of being a landscape architect, an architect, an engineer, and other design professions, she asked if there were other criteria to consider for the new Board members and alternates and, if so, what those are.

Board members provided possible areas of expertise for future Board members and alternates:

- a. Architectural Historian
- b. Shoreline and Benthic Ecologist
- c. Sociologist
- d. A Designer focused on Equity and Environmental Issues
- e. Transportation Planner or Social Scientist
- f. Social Equity Specialist

Mr. Pellegrini asked if all Board members could have a training to become more educated and informed about equity and social justice issues.

Ms. Barton stated Resilient by Design is a tremendous resource.

Ms. Alschuler asked what action is taken to ensure that the public is represented. Over the years, fewer and fewer members of the public attend Board meetings.

Mr. McCrea stated it may be the different meeting location and its proximity to public transportation. He stated the Board used to travel to other locations throughout the Bay.

Ms. Gaffney stated current regulations allow seven Board members and up to ten alternates.

Ms. Alschuler stated the regulations also state that alternates must be former Board members. She suggested changing that.

Ms. Gaffney asked for input on also changing the regulations about term limits. She asked if there would be a more active pool of alternates by limiting the term served on the Board.

Ms. Alschuler stated it is important that the right individuals are appointed to the Board.

Ms. Barton stated there is value to knowledge about how the Board operates over time but there is also value to freshness.

Mr. McCrea stated it takes years to get that experience. He suggested, if term limits are set, that they be set for seven years or beyond.

Ms. Barton suggested ten years.

Mr. Leader stated more individuals are needed in the pool to help make the meeting quorum.

Ms. Alschuler agreed that having a larger alternate pool would help.

Ms. Barton suggested syncing disciplines with topics, if possible.

Ms. Gaffney stated the current requirement is an architect, a landscape architect, and an engineer. Those three disciplines require an alternate for a backup. She asked Board members to email names to staff. She stated she will compile a list and will follow up about next steps. She asked Board members to include a sentence or two about why the individuals would be a good fit or a link to their biographies.

Mr. McCrea stated one of the frustrations heard over the years from the development community is, when plans come back for multiple reviews, that there are different viewers with differing comments.

6. Adjournment. Ms. Alschuler asked for a motion to adjourn the meeting.

MOTION: Mr. Leader moved to adjourn the February 11, 2019, San Francisco Bay Conservation and Development Commission Design Review Board meeting, seconded by Vice Chair Strang.

VOTE: The motion carried with a vote of 5-0-0 with Board Chair Alschuler, Vice Chair Strang, and Board Members Barton, Leader, and Pellegrini voting approval.

There being no further business, Ms. Alschuler adjourned the meeting at approximately 9:00 p.m.